

REMARKS

Claims 1-23 were presented.

Claims 1-13, 16-20 and 22-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,567,934 to Zheng et al. (hereinafter "Zheng") in view of U.S. Patent No. 4,488,679 to Bockholt et al. (hereinafter "Bockholt").

Claims 14-15 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zheng in view of Bockholt and further in view of U.S. Patent No. 5,600,166 to Seo et al. (hereinafter "Seo").

Response to Rejection of Claims 1-23 under 35 U.S.C. §103(a)

1. The Applicant Can Be His Own Lexicographer (MPEP §2111.01)

In the present application at the paragraph numbered [0006] as filed, the Applicants make the following statement:

Verifiers, as the term is used herein, are devices that are used to measure encoded indicia and to provide qualitative and/or quantitative analysis of the suitability of the encoded indicia for particular applications, i.e., a measurement of the quality of the encoded indicium, or qualification of the encoded indicium.

2. The Present Applicant Teaches Apparatus, Systems and Methods For Verifying the Quality of an Encoded Indicium

In the paragraph numbered [00011] as filed, the Applicants teach the following:

The inventive system provides all of the benefits of a verifier system that would be found in a high quality darkroom laboratory setting, but that eliminates many, if not all, of the tedious details of setting up a darkroom-type verification apparatus as would be found in a laboratory setting.

Numerous technical details of the inventive system, apparatus and method are explained with regard to Figs. 1-16 and their description in the Specification of the present application. It is clear from the Specification and Drawings that the present system, apparatus and method are capable of providing qualitative and quantitative information about the quality of an encoded indicium such as a bar code.

3. The Cited Art Does Not Teach or Suggest Measuring the Quality of an Encoded Indicium

Zheng

In the Office Action, the Examiner states that “Zheng does not disclose the imager measuring the quality of parameter of the encoded indicium ...”

Zheng at column 1, lines 49-55 teaches “A second problem, which is particularly common in shipping of packages and letters, results from the practice of placing a shiny protective layer, such as transparent tape, over the label. Such tape will cause specular reflection from the surface, which will obscure the image of the underlying label.”

Zheng at column 2, lines, 15-18, teaches “It is a further particular object of this invention to provide an apparatus and method for illumination and imaging of a surface which is not subject to specular reflection from the surface.”

Zheng makes clear at column 4, lines 16-39, that his apparatus is intended for use with labels that may be subject to specular reflection. For example, at lines 30-39 he teaches:

The use of the combination of first polarizing film 100 in the path of light from illumination apparatus 80 to the surface, and second polarizing film 102, having a polarization orientation at a 90.degree. angle from the polarization orientation of first polarizing film 100, in the path of light reflected from the illuminated surface to the camera 40, eliminates the effect of specular reflection of light from the surface. The use of first polarizing film 100 and second polarizing film 102 is particularly advantageous where apparatus 10 is used to read labels that may be covered with a shiny coating such as a transparent tape.

It is apparent that Zheng is not describing measuring an encoded indicium under conditions that are similar to a laboratory setting, because it would be unreasonable to

deliberately cover over an indicium that one wanted to study in detail with a film that might impede or distort the very observation that one intended to make.

Furthermore, Zheng teaches the use of tip switches to prevent the activation by hand operation of his device until it is seated against a package (see column 4, lines 41-65):

As shown in FIG. 4, tip switches 130, 132 are connected in series with hand switch 62. The signal from hand switch 62 will only be transmitted when both lower edges of shroud 20 are in contact with a surface, such as the surface of package 12 of FIG. 1. As a result, tip switches 130, 132 serve to prevent activation of illumination device 80 and of camera 40, except when the lower edge of shroud 20 is in contact with the surface."

Rather, Zheng is describing reading a label in the "real world" under conditions that may be uncontrolled, and in which a person shipping a package may cover over a label with transparent tape to prevent or limit damage to the label by water or mechanical abrasion, or to prevent the label from being inadvertently removed from a package to which the person applies the label. Nothing taught by Zheng teaches or suggests example that "the imager can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured."

Bockholt

The Examiner cites Bockholt at column 4, lines 10 and following for the proposition that Bockholt teaches a self aligning structure from which the quality of an indicium can be measured. The cited paragraph teaches:

As shown in FIG. 2, at each flash of a separate light behind each of the filters 52, 54, 56, the image data reflected from the code 41 is focused through a series of lenses 68, 70, on to a light sensitive image receiving means 72 such as a photo diode, photo-transistor or charge coupled device (CCD chip). By way of example, the imaging device will be described as a CCD chip, but may take any form, presently known, or to be discovered. For example, the CCD chip in FIG. 2 is assumed to have a matrix array of 256.times.256 active elements. These elements align with some 200.times.200 dots on the code 41, which is assumed to be a data field of 1".times.1", that is, have some 40,000 dots per square inch. **Either the microprocessor firmware or the PCB board includes sensing means, known in the art, to determine whether or not there is satisfactory alignment with the code being read.** If desired, this firmware could be used to automatically start the sequential reading cycle,

once the alignment is proper. Each time a filtered light is flashed, the sensing elements on the CCD chip record an image corresponding to the colors of the code not filtered out. To insure proper operation of the scanner or reader, the rectangular portion 42b of Body 42 substantially blocks ambient light from entering the interior of the body when the reader is placed over the code. (emphasis added)

Applicants are well versed in the art of decoding bar codes, and understand that **“sensing means, known in the art, to determine whether or not there is satisfactory alignment with the code being read”** only provides a “go-no go” criterion that either allows decoding to occur or inhibits decoding. A “go-no go” criterion does not provide qualitative or quantitative information about the quality of the indicium being viewed so that the quality of the encoded indicium can be measured.

Bockholt teaches “[a] code reading system is disclosed utilizing a novel, multicolored, densely packed code read by a scanner which is placed over the code and held in place while the scanner performs its reading function.” (See Bockholt at Abstract).

Bockholt teaches systems and methods that are directed to packing information densely, for example to allow printed matter to be used for computer programming purposes as repositories of code. Bockholt at column 1, lines 5-9 teaches “[t]he present invention relates to an improved code and reading system therefor, and in particular to an improved code and reading system which uses multiple colors to allow a large quantity of information to be densely packed into a smaller area and accurately read.” The same teaching appears repeatedly throughout Bockholt, for example at column 1, lines 53-58; column 2, 44-47; and column 5, line 27, through column 6, line 59.

Bockholt does not teach or suggest measuring the quality of his code, which is indicated to be provided at a resolution of 200 x 200 dots per inch (see column 5, lines 32-35, and claim 1 of Bockholt). Rather, at best, Bockholt at column 7, lines 1-7, teaches that his system can determine that no data is available for use:

The reader distinguishes between the actual data and the background of the field. As long as only background is seen by the reader, it is ignored and an indication is given to the operator that no data can be discerned. When actual data is detected the indication changes, so that the operator is at all times informed about the status of the system.

Bockholt does not teach or suggest that “the imager can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured.”

Seo

The Examiner cites Seo for the proposition that “Seo teaches an optical data reading device having an analysis module (image processing unit 20) to perform a predetermined process on the signal (e.g., the light control unit controls the amount of light generated by the light source in accordance with a processing result obtained by the analysis module, thus providing a measure of quality of a parameter of an encoded indicium verification based on the amount of light generated by the light source).” The conclusion reached by the Examiner is unsupported by the facts of the disclosure.

Seo teaches an improvement in light source control for an optical data reading device. Seo teaches in the Abstract that “[t]he light source control unit controls the amount of light generated by the light source in accordance with a processing result obtained by the image signal processing unit.” It is clear from Fig. 1 of Seo and its description (see column 2, line 52, through column 4, line 9) that a feedback loop (lamp 31, CCD 12, image signal processor 20, and light source control circuit 14 controlling lamp 31) is the inventive feature of the disclosure so that **“it is determined whether or not the luminance value is within a predetermined range.”** (Column 4, lines 23-25, emphasis added) Determining whether a luminance value is in a predetermined range in no way explains how to measure the quality of an encoded indicium. It simply says that the light level needs to be within a range where the optical system can operate satisfactorily.

Seo does not teach or suggest that “the imager can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured.”

As explained, the art cited by the Examiner in the present Office Action is at best intended to read a bar code, color coded information, or the like, but does not provide any information about the quality of the bar code that has been inspected. At best, the apparatus and methods taught by the cited art indicates that a printed indicum in use is somehow

unsuitable for use (for example, as Zheng teaches, because of specular reflections from tape applied over the indicium) or because the indicium has been damaged. However, none of the cited art teaches for example that "the imager can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured," as is required by independent claims 1, 10, and 19.

4. The Examiner Has Not Met Her Burden To Show A Motivation, Suggestion, Or Teaching To Combine The Teachings Of Two Or More Patents

The Examiner has a burden of demonstrating that there exists a motivation, suggestion, or teaching to combine the teachings of two or more patents, which motivation, suggestion, or teaching must be found independent from the teachings of the application being examined. See *In re Werner Kotzab*, 217 F.3d 1365 (CAFC, 2000).

The CAFC stated in *Kotzab* at pages 1369-70 (citations omitted):

Most if not all inventions arise from a combination of old elements. Thus, every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. Broad conclusory statements standing alone are not "evidence."

The MPEP at §2143 Basic Requirements of a *Prima Facie* Case of Obviousness explains that:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, **and not based on applicant's disclosure**. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (emphasis added)

There has been no motivation, suggestion or teaching by the Examiner as to why one would seek to combine the imager of Zheng (which is used for "real world" bar code scanning) with the multicolored system and method of Bockholt that is used for computer programming, and further with the system of Seo for controlling a luminance value with a feedback loop. There is no motivation, suggestion, or teaching in any of the three cited patents that would suggest such a combination with either of the other two. Bockholt, at column 1, lines 10-30 recites the negative limitations of simple black and white ("black and white" is inferred because Bockholt later describes unsuitable systems using "different colors") bar code readers and bar codes and states that the methods for such black and white codes and systems are unsuitable for his ends and objectives, thereby **teaching away** from using his invention with such systems. It appears that the only motivation to combine these three references is in fact applicants' disclosure.

Applicants respectfully traverse the rejection of claims 1-23 because there has been no teaching or suggestion by any of Zheng, Bockholt, and Seo individually that one can provide an imager that "can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured." Accordingly, if none of the individual references teaches or suggests an apparatus, system or method by which one "can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured," then no combination (assuming such combination were

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permitted, which Applicants do not concede) of Zheng, Bockholt or Seo can overcome the individual failing of any of the other two references as regards this limitation.

Therefore, for the reasons recited above, Applicants respectfully submit that each of independent claims 1, 10 and 19 is allowable over the cited art. In addition, because a dependent claim is considered to incorporate by reference every limitation of a claim from which it depends, each of dependent claims 2-9, 11-18 and 20-23 include the limitations of independent claims 1, 10 and 19 from which they depend, respectively (35 U.S.C. §112, 4th paragraph), Applicants respectfully submit that each of claims 2-9, 11-8, and 20-23 are allowable if base claims 1, 10, and 19 are allowable.

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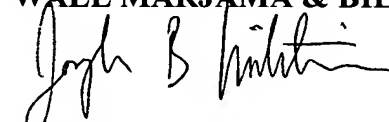
CONCLUSION

Applicants respectfully request that the application be reconsidered and that the rejections of Claims 1-23 be withdrawn. Applicants submit that Claims 1-23 are now in proper condition for allowance, and requests the issuance of a Notice of Allowance at the Examiner's earliest convenience..

If the Examiner believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, the Examiner is requested to call Applicants' attorney at the phone number noted below.

Respectfully submitted,
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